



ABOUT A SCIENTIFIC TEAM

**Ilya
Tarasov**



**Chemical technology in
polymer chemistry**

**Igor
Sirotnin**



Polymer chemistry
Ph.D.
27 articles
3 patents

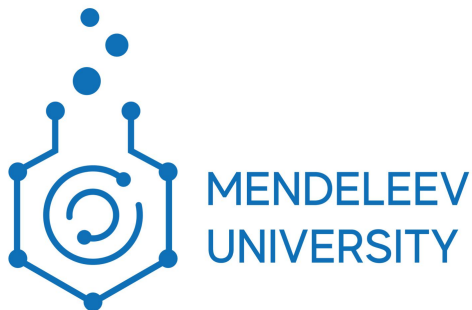
**Denis
Onuchin**



**Chemical engineering for the
processing of plastics and
composites,**
Ph.D.

ABOUT A DEVELOPMENT BASE

**D.I. Mendeleev University of
Chemical Technology of Russia**



Scientific consultants - 6 doctors of
science
Personnel - postgraduates and
undergraduates



Acceleration program in 2019
for high-tech chemical projects

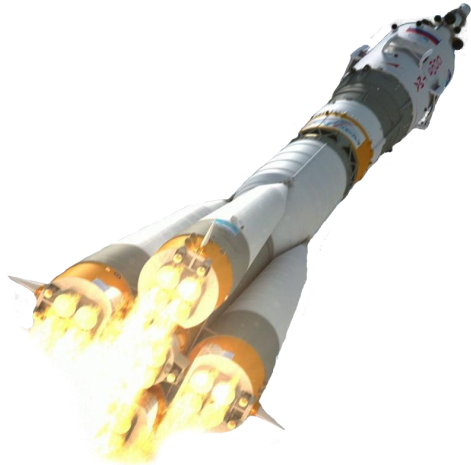
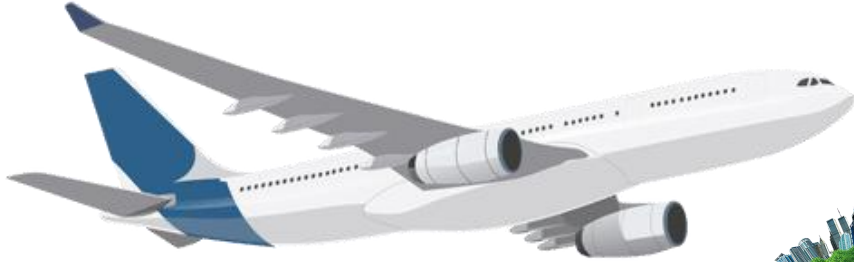


LLC "Polyofit"
small innovative enterprise (SIE)
at D.I. Mendeleev University



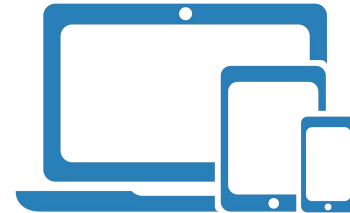
«Skolkovo» resident

PLASTIC WORLD ALL AROUND



USD 74 B

world market of composites

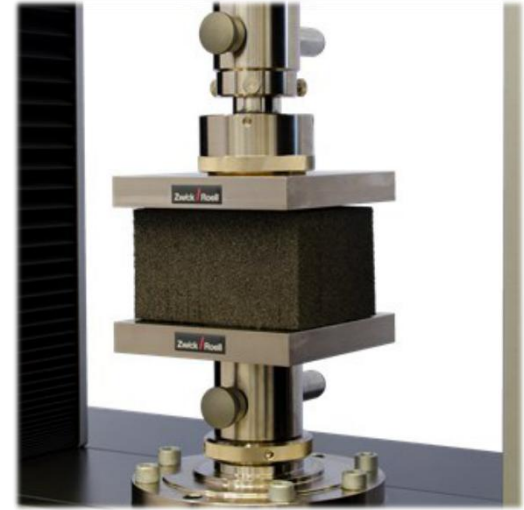


WE CREATE BETTER POLYMERS



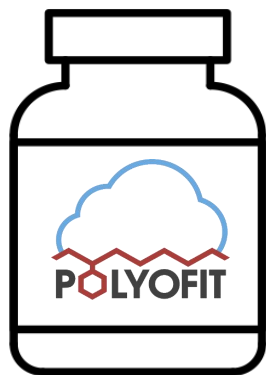
OUR POLYMERS

- ✓ Safe
- ✓ Effective
- ✓ Green



ABOUT MATERIALS WE DESIGN

We design and manufacture modifiers that improve the mechanical and thermal features of most polymers.



additives



liquid or solid polymer



Polymer with NEW features



Customized



**Unique features
combination**

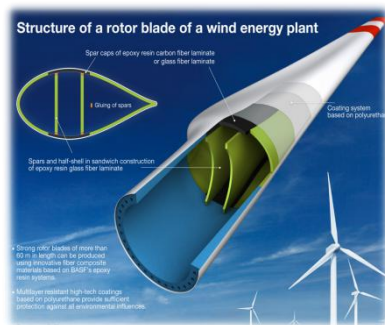
NEW opportunities for usage

AREAS OF APPLICATION

product #1



May be used as additive and as base polymer



■ Carbon laminate
■ Carbon sandwich
■ Fiberglass
■ Aluminum
■ Aluminum/steel/titanium pylons

30% Weight ↓
↑ length of blades
↑ x2 power generation

30% Weight ↓
↑ 20% Fuel
↑ range of flight

WHAT WE HAVE ACHIEVED

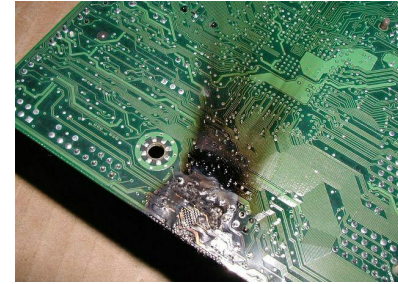
product #1



microcircuit + common resin



$T = 200\text{ }^{\circ}\text{C}$



microcircuit + modified resin



$T = 200\text{ }^{\circ}\text{C}$



30%

heat resistance

WHAT WE HAVE ACHIEVED

product #1

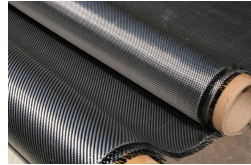


Carbon cloth

+



=



Carbon cloth

+



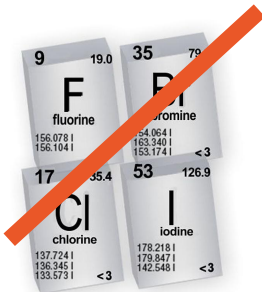
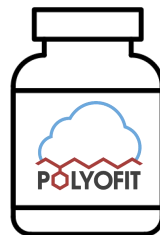
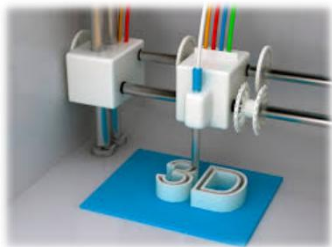
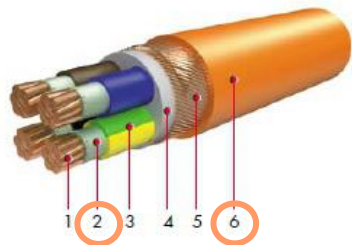
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 **x2.5**
strength

WHAT WE CAN DO

product #2

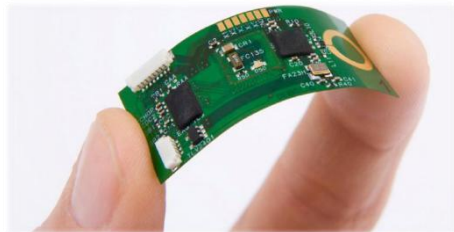


WHAT WE CAN DO

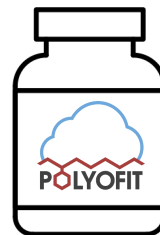
products #3, #4, #5



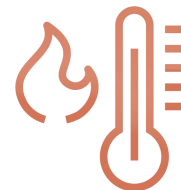
#3



#4



Wear protection

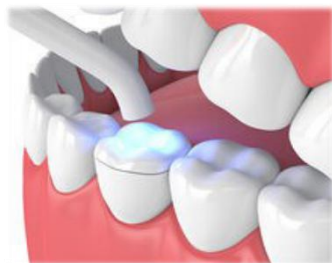


Heat resistance

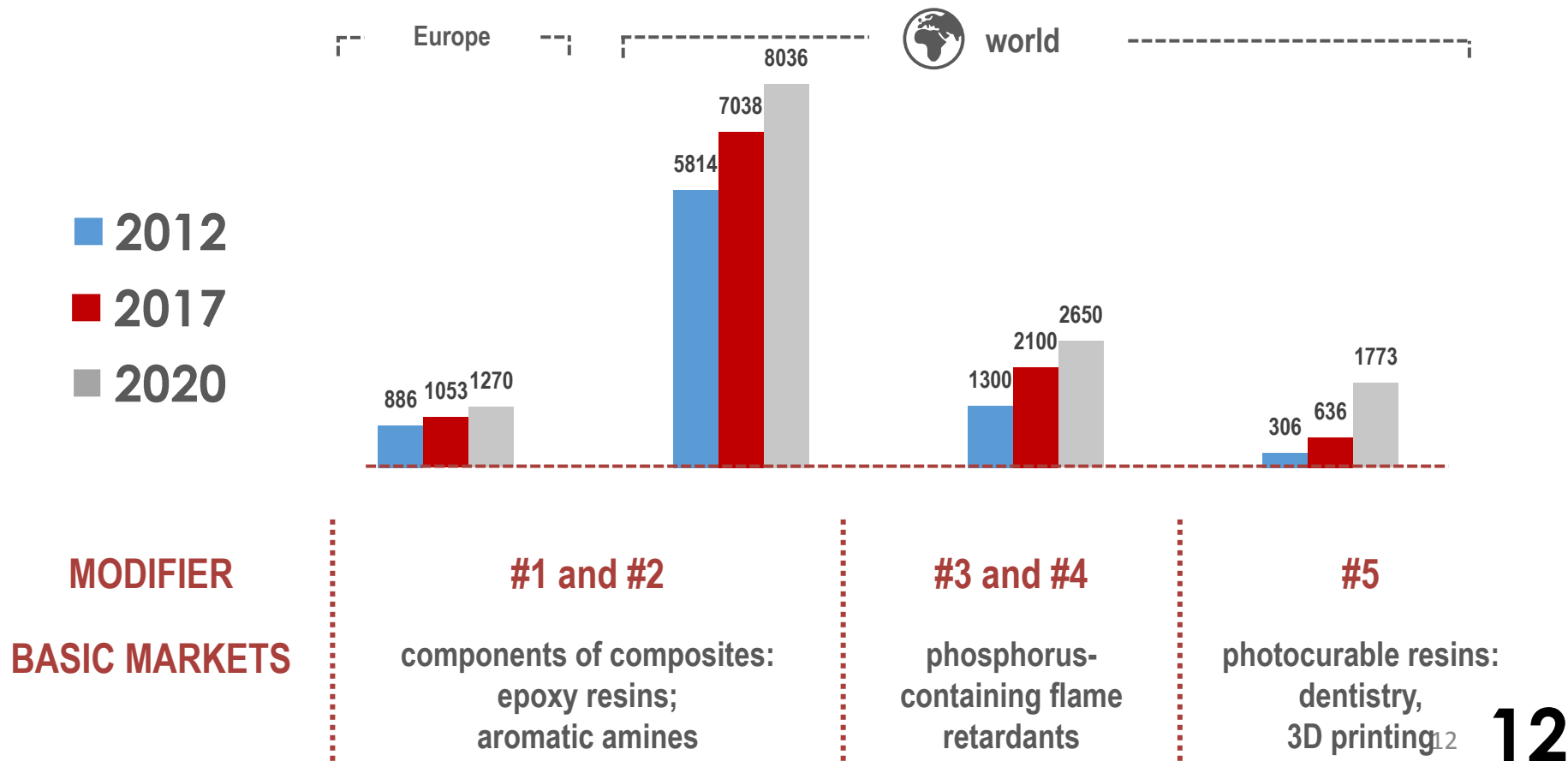


Customization

#5



VOLUME OF TARGET MARKETS (mln. \$)



COMPETITIVE SITUATION IN THE WORLD: MODIFIED EPOXY RESINS

MODIFIED EPOXY RESINS

Fire resistance
Manufacturability/usability
Heat resistance
Durability

ACM 1412
(UMATEX)


No data
Medium
Medium
High

KDP-550MC65
(KukDo Chem.)

High
Medium
Low
High

ER2218
(Electrotube)

High
High
Medium
No data



POLYOFIT

product #1

High
High
High
High

COMPETITIVE SITUATION IN THE WORLD: FIRE RETARDANT

FIRE RETARDANT

Material heat resistance

No side effects

Effective dose

TCF

(tricresyl phosphate)

Low

Medium

Low

RDP

(resorcinol bis(diphenyl
phosphate))

Medium

Medium

Medium



product #3

High

High

High

IP STATUS

